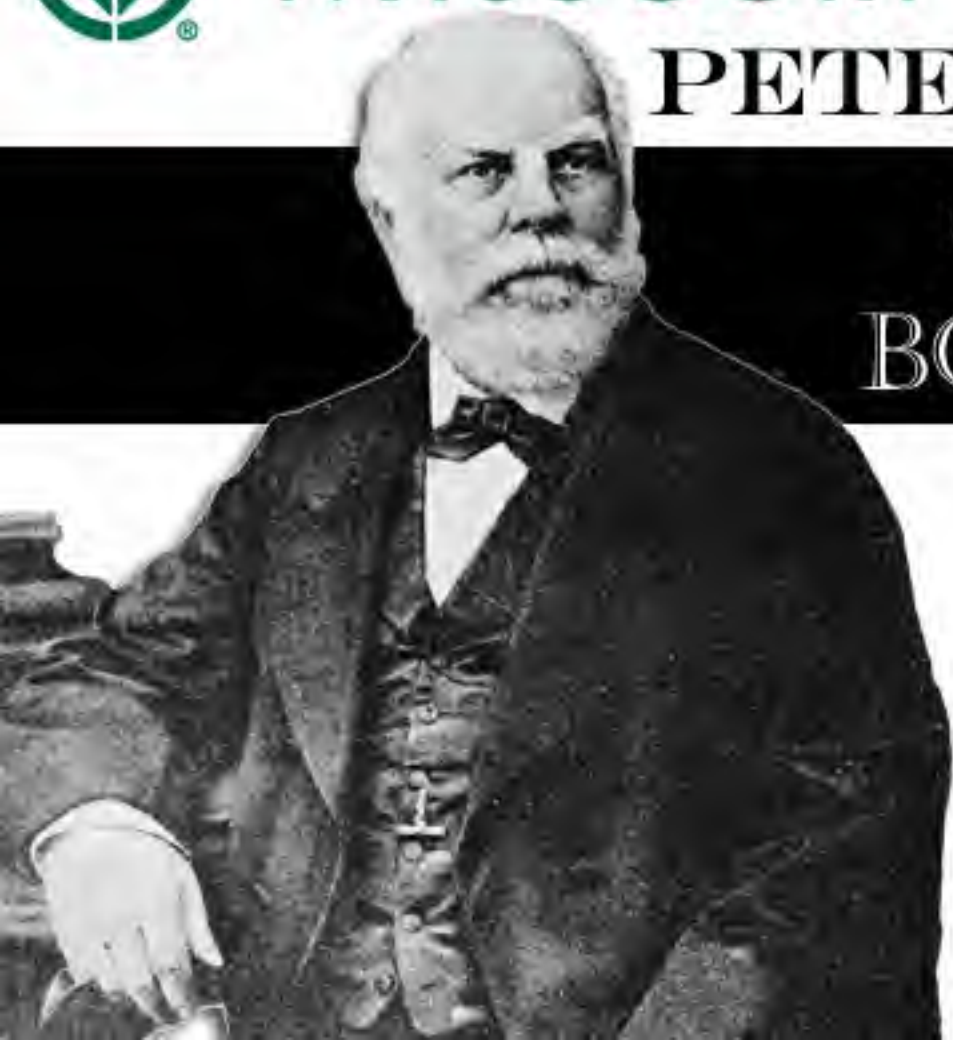


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Pagination Note:

Since many of the items lack a specific page number, the page number displayed online refers to the sequentially created number each item was given upon cataloging the materials.

J. trinervis Liebm

Steud. glum

2.293

W. 39

Mexico 744

Hb. M.

804-6

116

TRANS. OF THE ACAD. OF SCIENCE.

IV. Direction of Winds and number of Thunderstorms in '61 & '62.

1861.	E. N. N.E. S.W. N.W. S. W. S.E. Prevailing Winds. Thunderstorms.									
	E.	N.	N.E.	S.W.	N.W.	S.	W.	S.E.	Prevailing Winds.	Thunderstorms.
January.....	11	3	12	22	38	18	28	61	S.E.	0
February....	4	2	2	35	24	19	41	60	S.E.	2
March.....	12	11	10	23	30	19	42	40	W. & S.E.	3
April	16	10	9	26	21	35	34	26	S. & W.	2
May	26	10	23	21	8	13	49	35	W. & S.E.	5
June	12	21	22	20	25	26	8	41	S.E.	7
July	3	31	14	21	26	46	15	29	S.	3
August	18	24	58	17	11	18	3	37	N.E.	5
September...	6	14	18	23	30	13	21	52	S.E. & N.W.	3
October	12	9	5	21	30	33	30	46	S.E. & S.	1
November...	7	15	8	22	27	20	36	44	S.E. & W.	1
December...	9	19	9	25	23	33	17	51	S.E. & S.	0
	136	169	190	279	293	293	324	522	S.E.	32

1862.	E. S.W. N. N.E. W. S. N.W. S.E. Prevailing Winds. Th. st's.									
	E.	S.W.	N.	N.E.	W.	S.	N.W.	S.E.	Prevailing Winds.	Th. st's.
Jan.....	19	6	19	23	29	3	38	51	S.E.	1
Feb.....	14	9	18	16	22	7	39	43	S.E. & N.W.	0
March...	9	14	3	15	59	10	34	43	W., S.E. & N.W.	4
April	12	13	18	31	18	11	34	47	S.E., N.W. & N.E.	6
May	12	18	14	38	18	30	14	44	S.E. & N.E.	5
June	3	29	24	16	8	36	26	23	S., S.W., N.W., N. & S.E.	6
July.....	5	25	17	7	2	24	31	77	S.E.	10
August..	6	16	16	45	5	22	28	48	S.E. & N.E.	7

Nodosi Gaudin

capitata

brachyloba Liebm. *brachyloba* Liebm.



0 1 2 3 4 5 6 7 8 9 10

cm

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Additional Remarks on ATMOSPHERIC ELECTRICITY.

By A. WISLIZENUS, M.D.

The delay in the publication of this volume enables me to add to my observations of atmospheric electricity in 1861, the result of my observations in 1862. The latter observations have been made in the same manner and by means of the same fine glass thread, which, after many thousand torsions, proves as good as ever. I present herewith in tabular form the general result of my observations in 1861 and 1862.

I. *Monthly mean of Positive Atmospheric Electricity in 1861 and 1862, at St. Louis, Mo., based upon daily observations at 6, 9, 12, 3, 6 and 9 o'clock, from morning till night.*

	Jan.	Feb.	Mar.	Apr'l.	May.	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Mean of Year.
1861*.16.5	12.1	9.8	8.8	7.8	4.0	3.7	3.4	3.0	7.1	10.0	14.3	8.4	
1862...12.1	16.0	9.4	10.6	7.5	3.0	2.2	2.3	3.0	7.7	12.6	13.9	8.4	

* This table of 1861 differs in some decimals from that published on page 66 and in Diagram No. 1. Having discovered some errors, I calculated all my observations once more, and give now the present as the corrected table.

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9845



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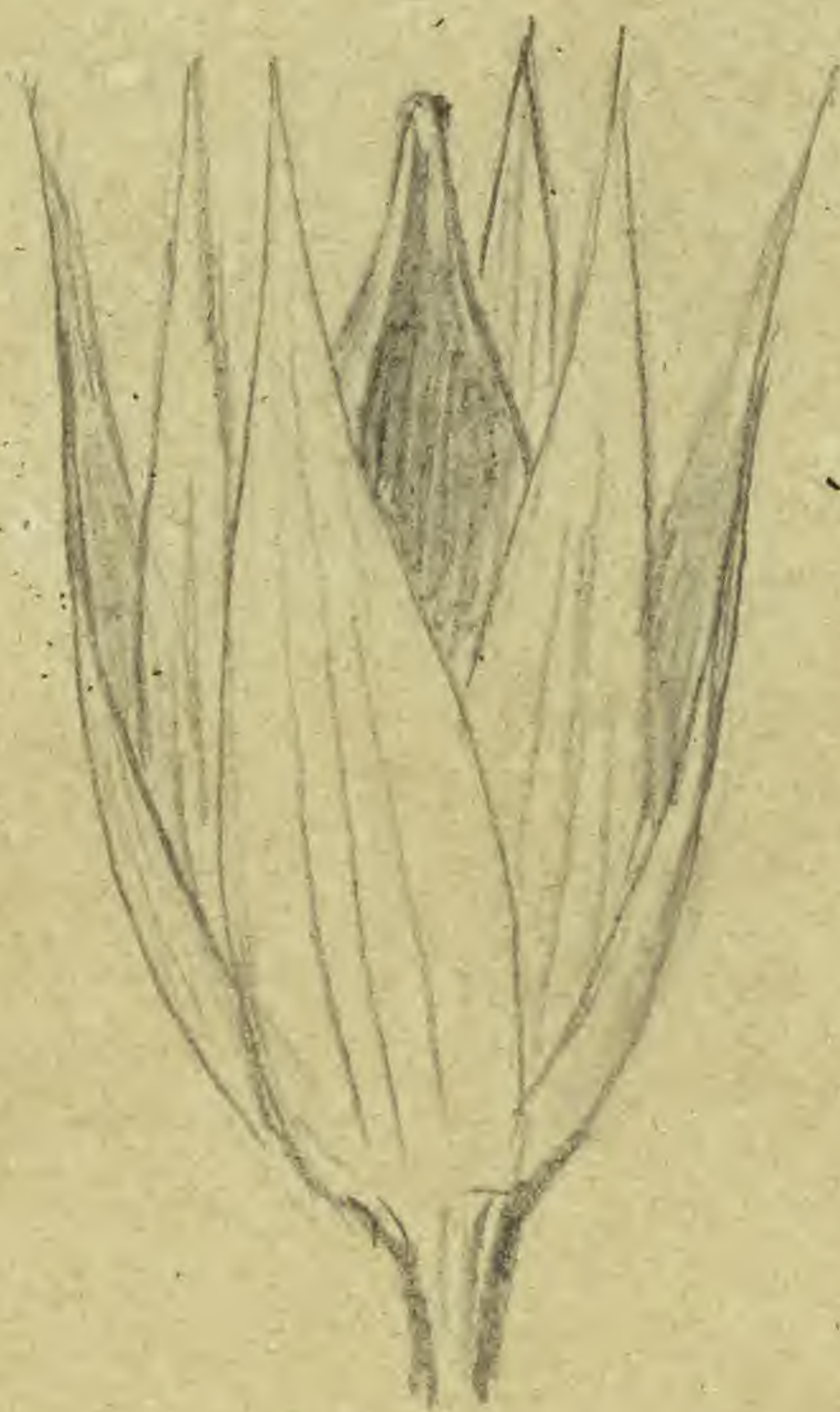
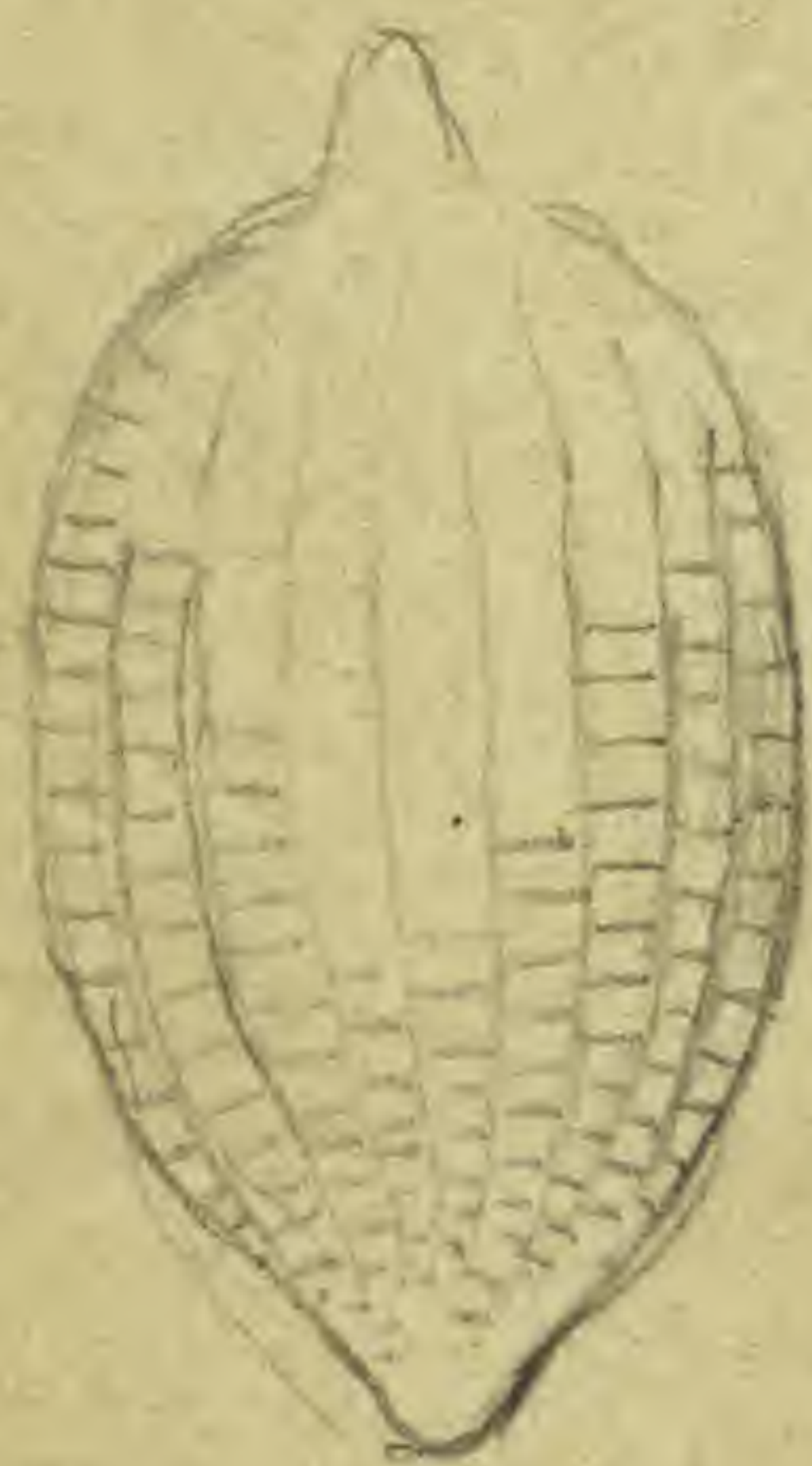
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Juncus trinervis Liebm (9-E) Sept 24 1865-
 [Berlandier] No 744 Mexico in Herb J.B. Mission
 capit 8-12 flora

x60



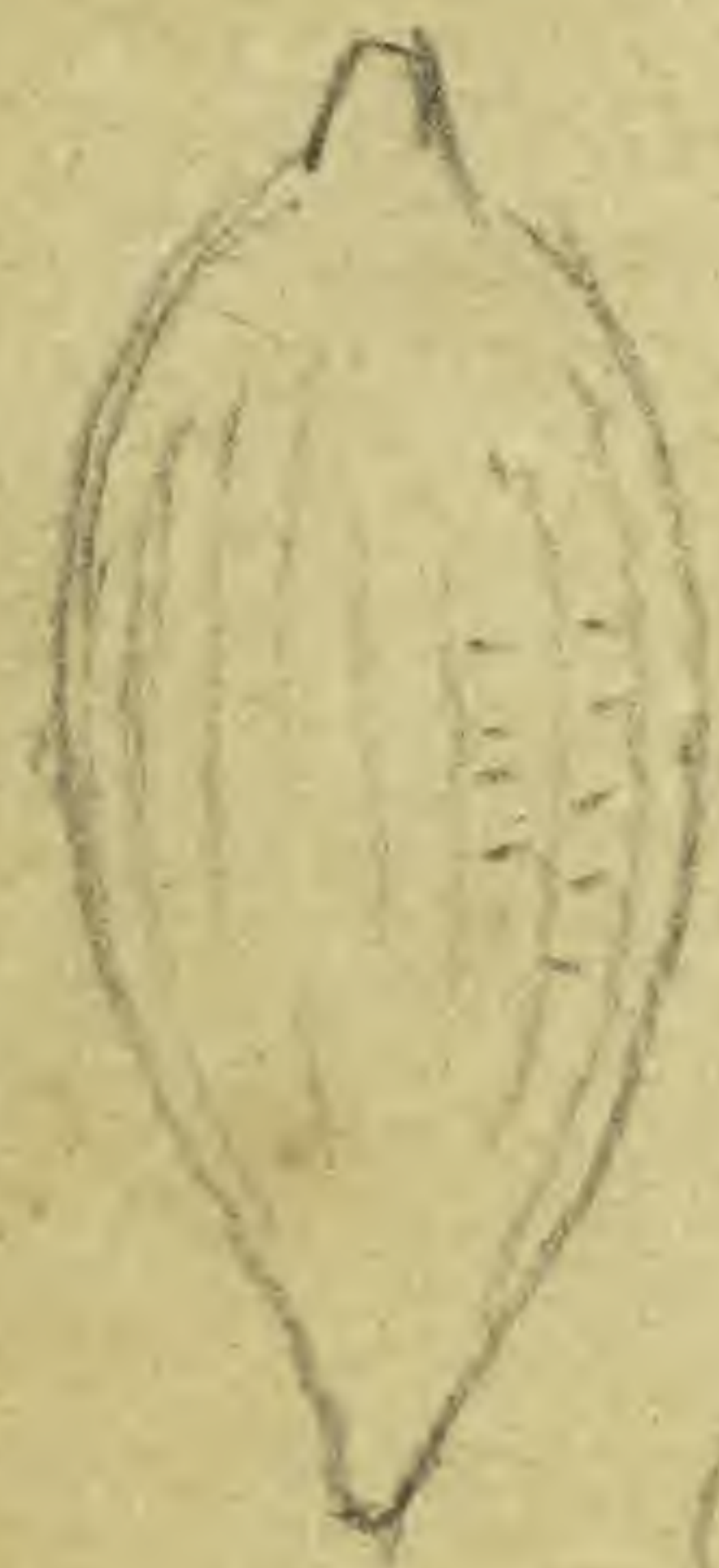
x10



before flaring



after



8 April 1866

not quite ripe
 (Lincolns?)

plus tritibus
 valde nodosis
 caule compresso



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Funaria

Dec 19 1866

W. Schaffner 529 s-b nem *F. nodosus*

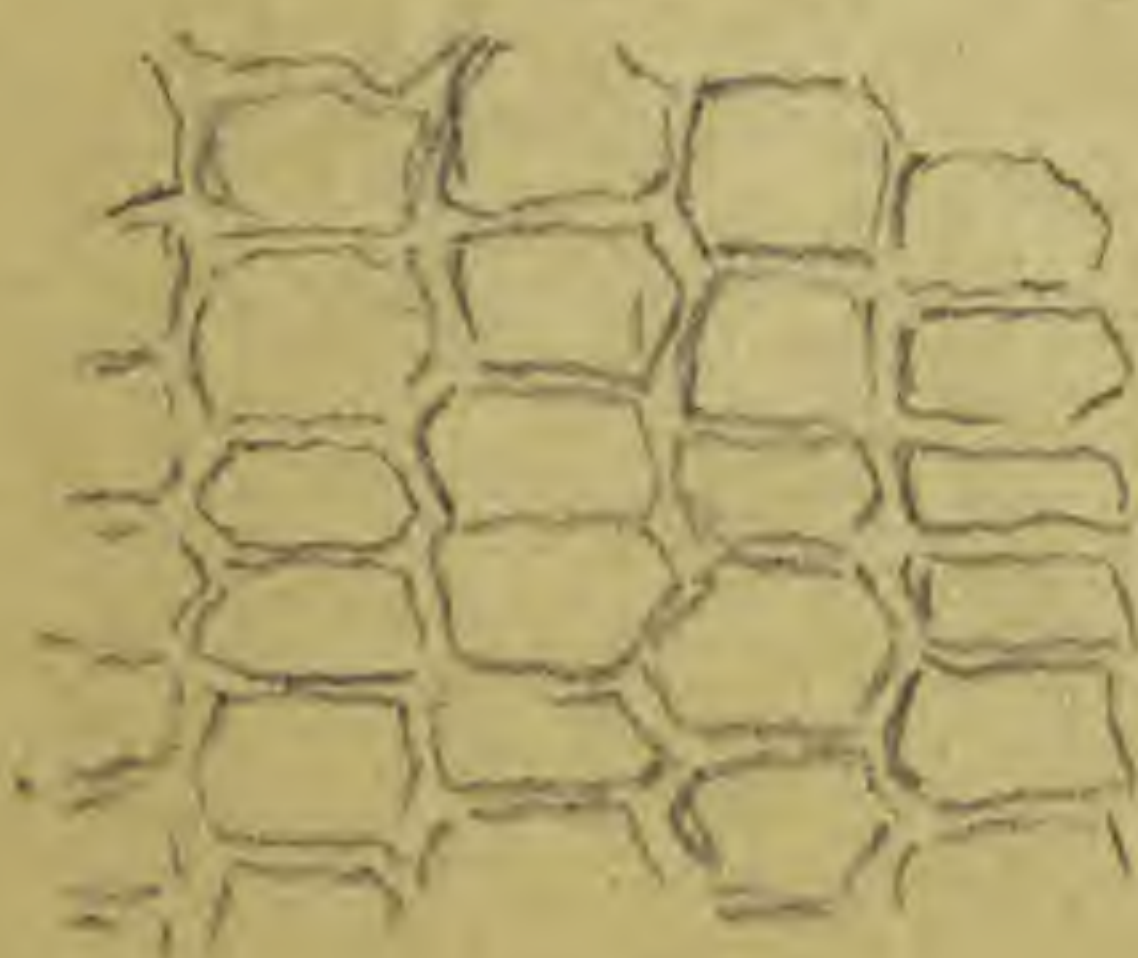
Valle d' Mexico

Aug 1855

x60



about 8 ribs



x150



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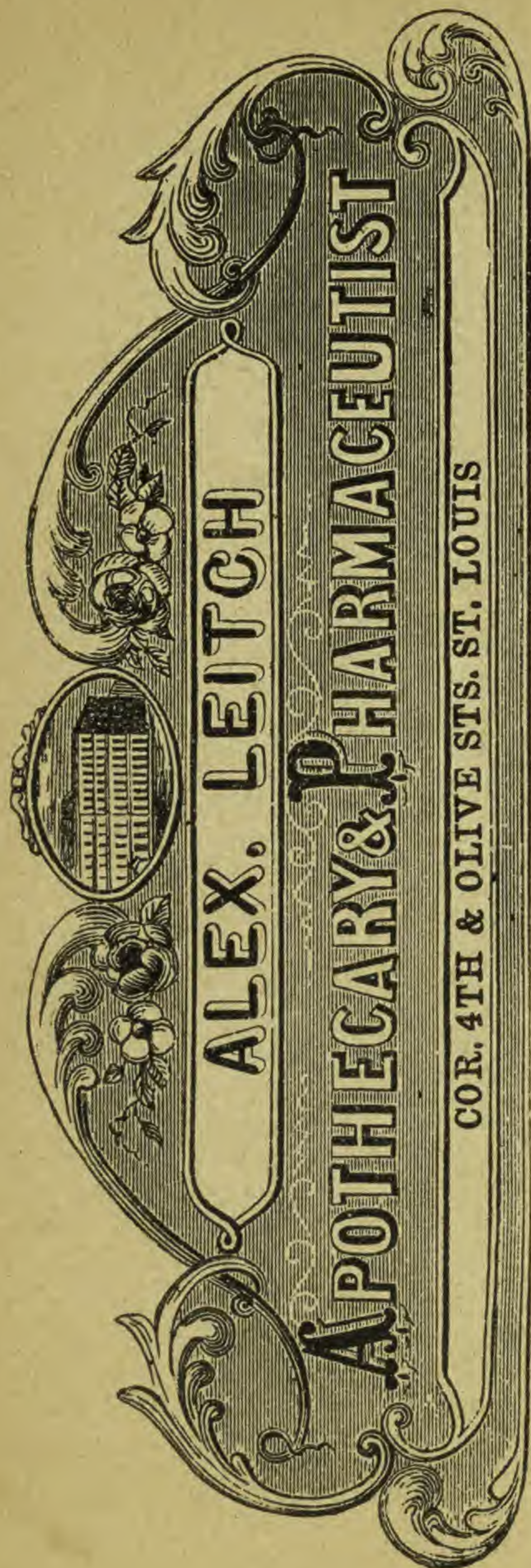
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Juncus

Dec 19 1866

subgenus *J. nodosus*

W. Schaffner ex 526

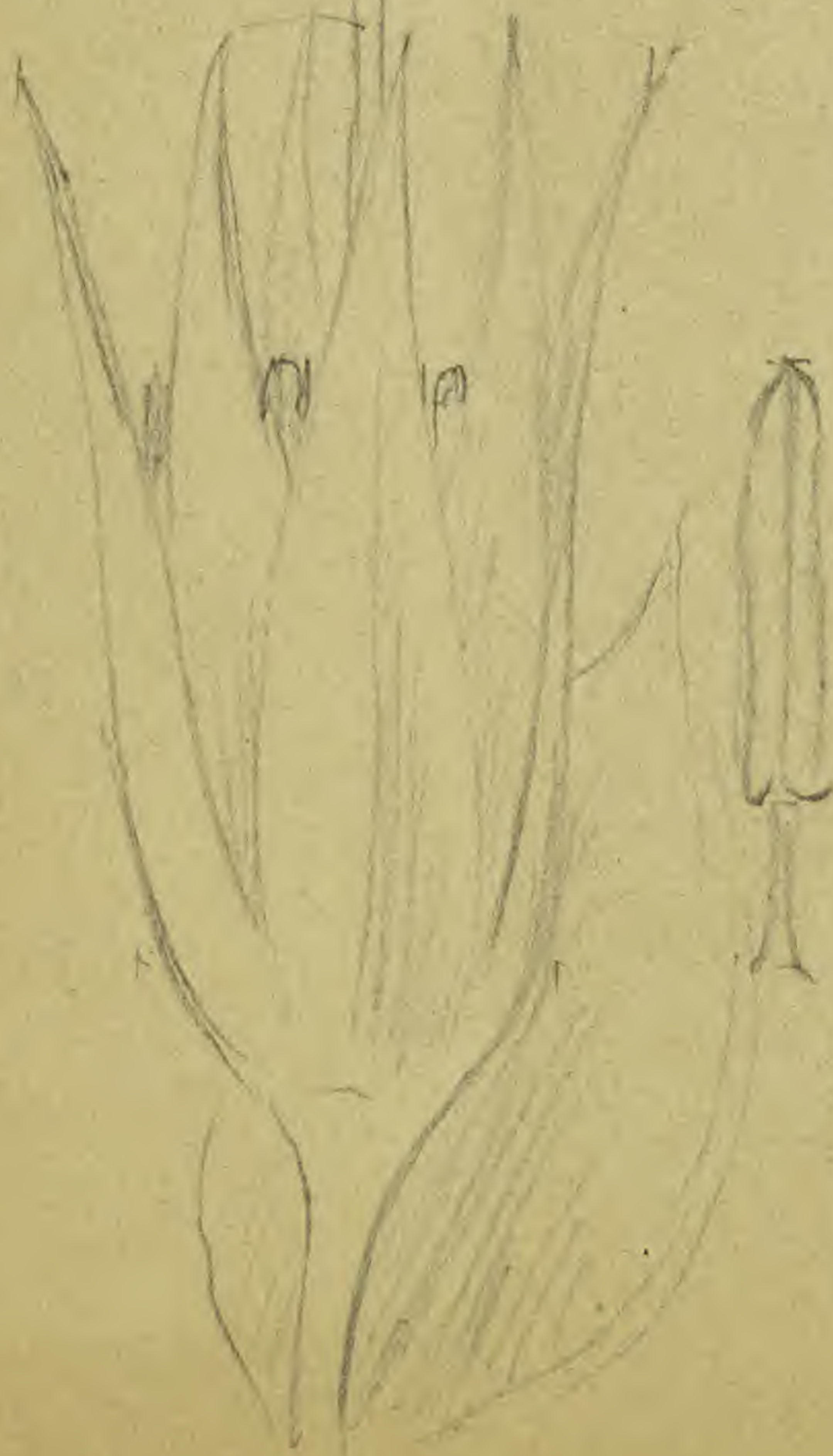
Tumbaya, Mexico Aug 1855

x10

3!

heads brown

10-20 flowers



very young
fruit

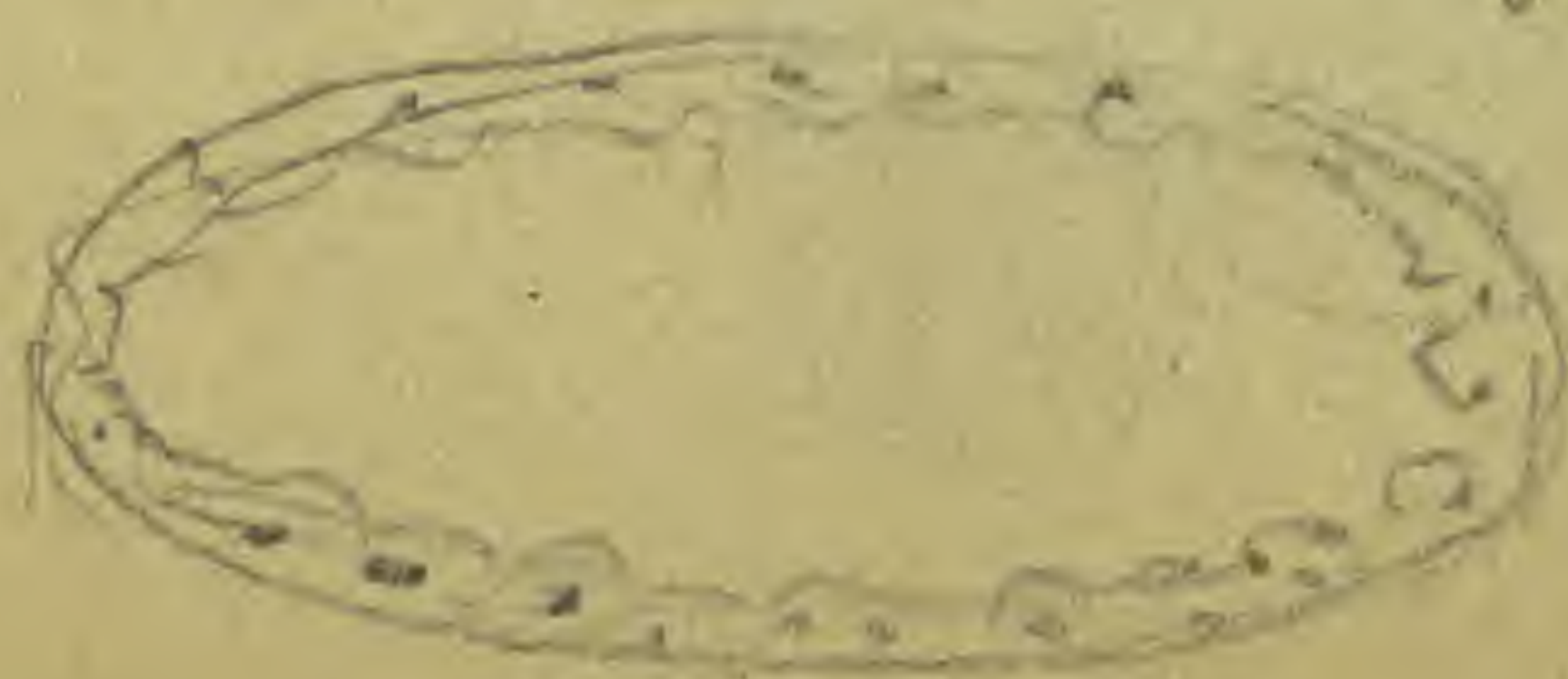
pistil



cut of leaf

x10

hollow



0 1 2 3 4 5 6 7 8 9 10

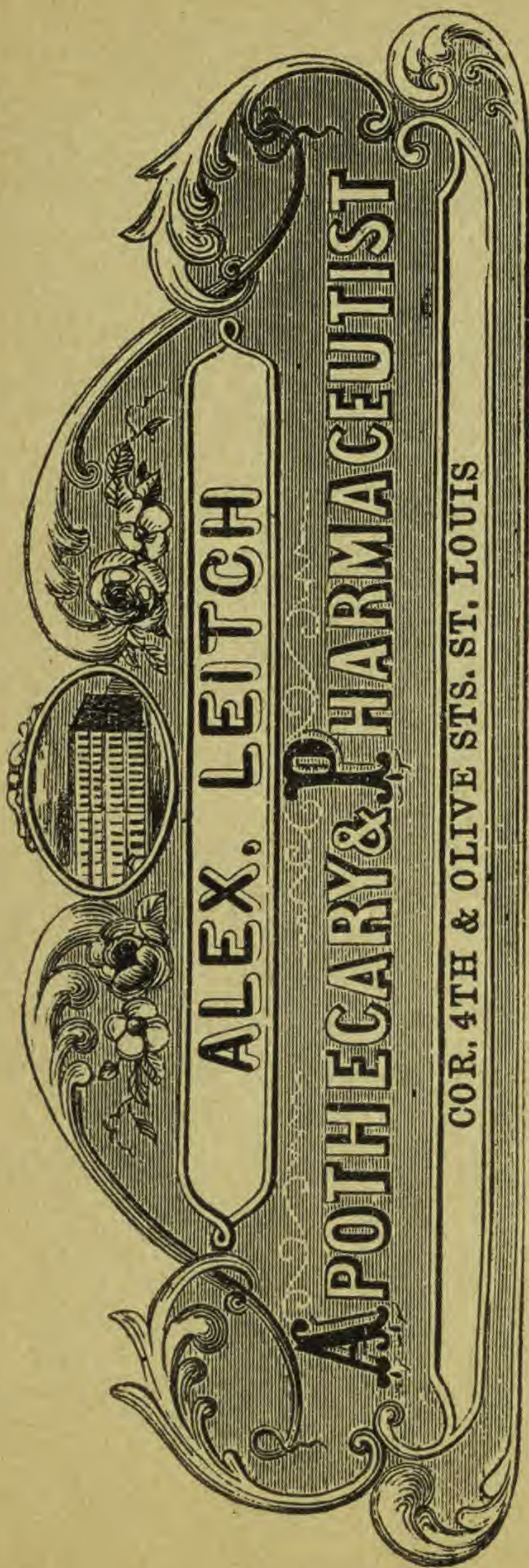
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ering.

Dimensions.—Length, 0.20 of an inch; width, 0.18.

The *Elæacrinus Kirkwoodensis* is nearly allied to *E. (Pentremites) melo*, from which it is distinguished by its much smaller size and less deeply excavated base. It also occupies a higher geological position.

Occurs in the St. Louis Limestone (Carboniferous) on the Pacific railroad near Kirkwood, St. Louis county, Missouri.

8

J. phaeorephelus

Mexicanus *teretifolius*

probably distinct, the name

J. Mexicanus or *J. phaeodes*
fol. teret. - compress
sepl. distinct - lanceolate
caps. large acuminate.



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the nervis Lieb
under ea

6486

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cumstances prevented me from obtaining more than a few crystals, which are now deposited in the collection of the Smithsonian Institute; a few others are also in the hands of members of the party. We were travelling at the time by forced night marches with nearly worn out animals, seeking to gain a spring of water in a distant range of mountains. This desert was then entirely unexplored. I have but little doubt that more interesting materials are to be found at the same point.

The mountains of the former Territory of Utah promise a rich yield to the mineralogist. We know already of gold and silver ores in the east, west and south part of that district; of copper and lead ores in the south, and I have discovered the latter also in the centre of it; of specular iron ores and native sulphur in the Rocky Mountains and near Little Salt Lake; of rock salt in the mountains south-east of Utah Lake; of native alum near Salt Lake; of various other salts in the deserts; and of silicates, composing the granites, porphyries, diorites, trachytes, and lavas, nearly over the whole area.



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8-608

118

TRANS. OF THE ACAD. OF SCIENCE.

interrupted descent and ascent took place from January to December, we find in 1862 some interruptions in the steps of that ladder. The electricity in February, 1862, is about four degrees higher than that of January, April somewhat higher than March, and July is the lowest instead of September in 1861. These trifling irregularities may be accounted for by differences in temperature and relative humidity, and by a greater number of thunderstorms in 1862. January of 1862, for instance, was so unusually rainy, that its relative humidity too was unusually high, diminishing thus electricity. But the general features of distribution of electricity throughout the year are apparent in both years, and we may in that respect divide the twelve months of each year into two or three groups. Computing the months which give the highest electricity and those which give the lowest in each year, we find that in both years the months of January, February, March, April, November and December exhibit the highest, and the months of May, June, July, August, September and October the lowest electricity. The first group gives

The aggregate monthly mean of 71.5 degrees of electricity in 1861
and 74.6 " " " 1862
While the second group gives 29.0 " " " 1861
and 25.7 " " " 1862

The second group prevailed therefore in 1861, and the 1st

trinevis Liebman
under capitati

brevisfolius
crispifolius

9849

9850

WISLIZENUS--ATMOSPHERIC ELECTRICITY. 117

VI. The appearance of negative electricity was connected in

1861. No. times.	1862. No. times.	
30	32	with thunderstorms.
23	28	with rains without thunder and lightning.
20	4	with dry storms (without rain and without thunder and lightning).
4	3	with snow.
1	0	with fog.
78	67	

VII. Relation of Rain and Snow to Electricity.

Rain without thunderstorm was accompanied

	By Positive Electricity.		By Negative Electricity.		By no Electricity.	
	In 1861.	In 1862.	In 1861.	In 1862.	In 1861.	In 1862.
January	7	5	3	2	2



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cm

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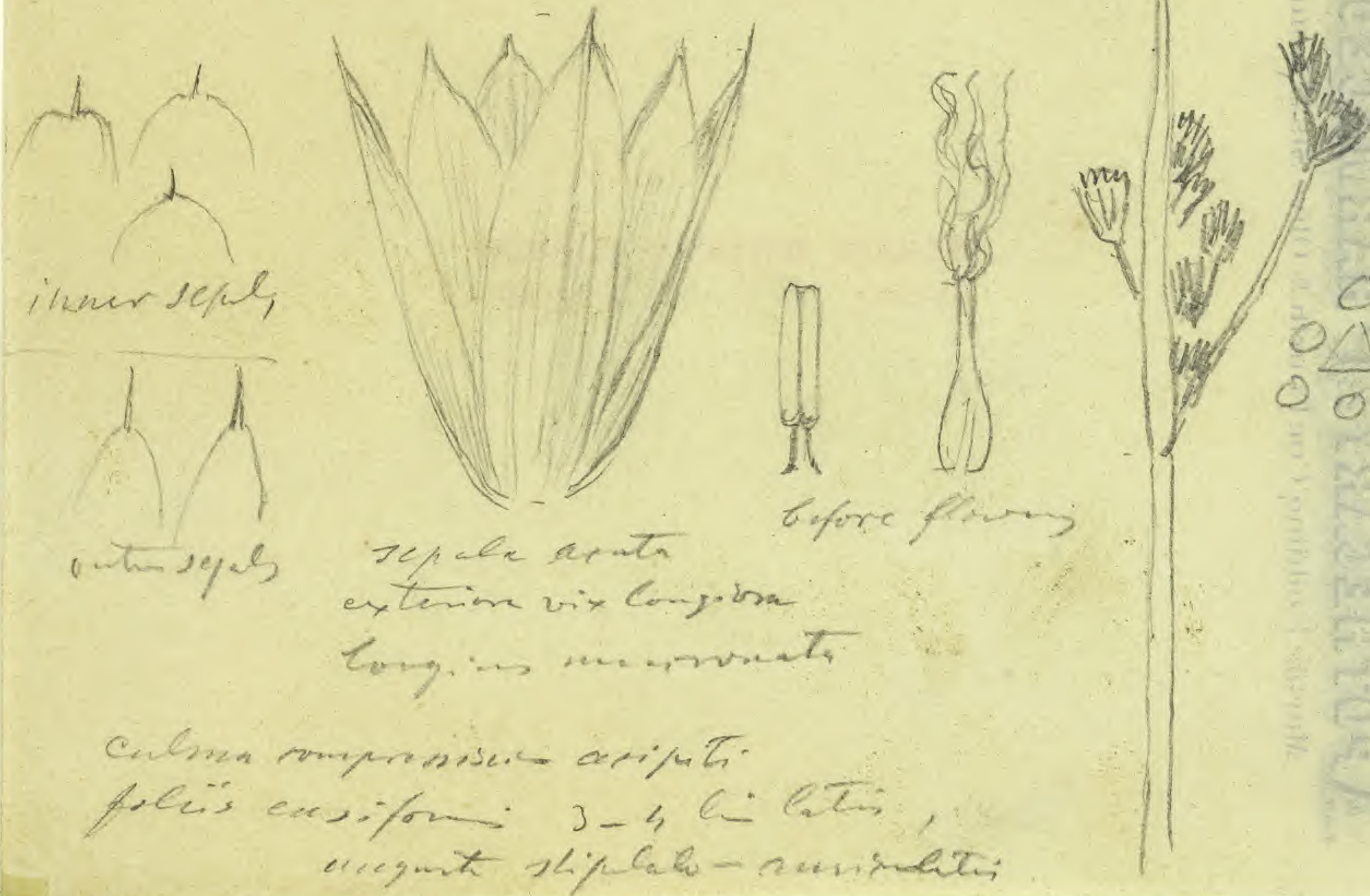
MISSOURI
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Juncus phaeocephalus,
J. paniculatus
 Napa valley, Calif. J. B. Howell

Oct 23 1865

Hb Gray

x10



0 1 2 3 4 5 6 7 8 9 10

cm

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2340 *Juncus phaeocephalus*

Jan 6 1866

Bolander No 4 *P. paniculatus*

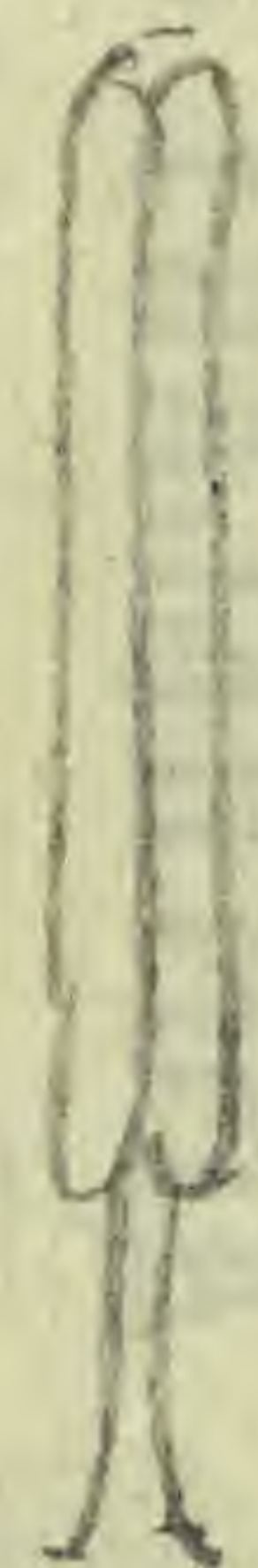
(antheris nullis)

panicula composita

capitula 10-12 flora

vaginae sine bracteolis

excurrentes



sepalis interioribus latioribus acutis, pediculis brevioribus



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cm

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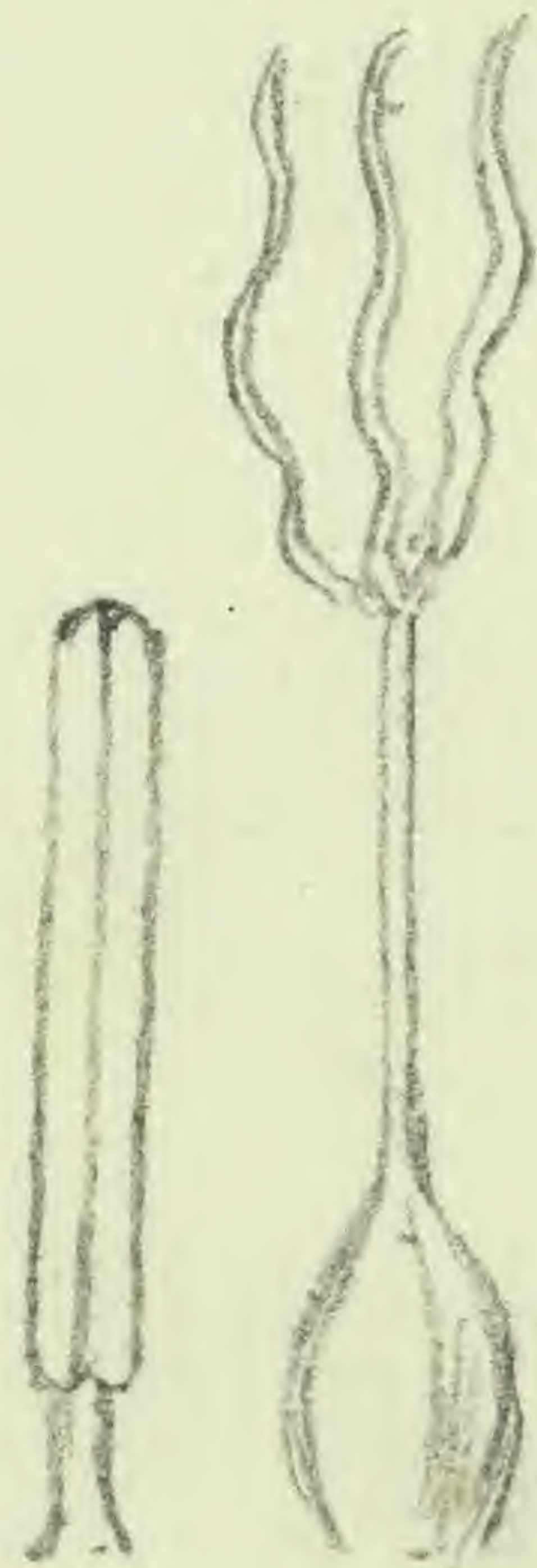
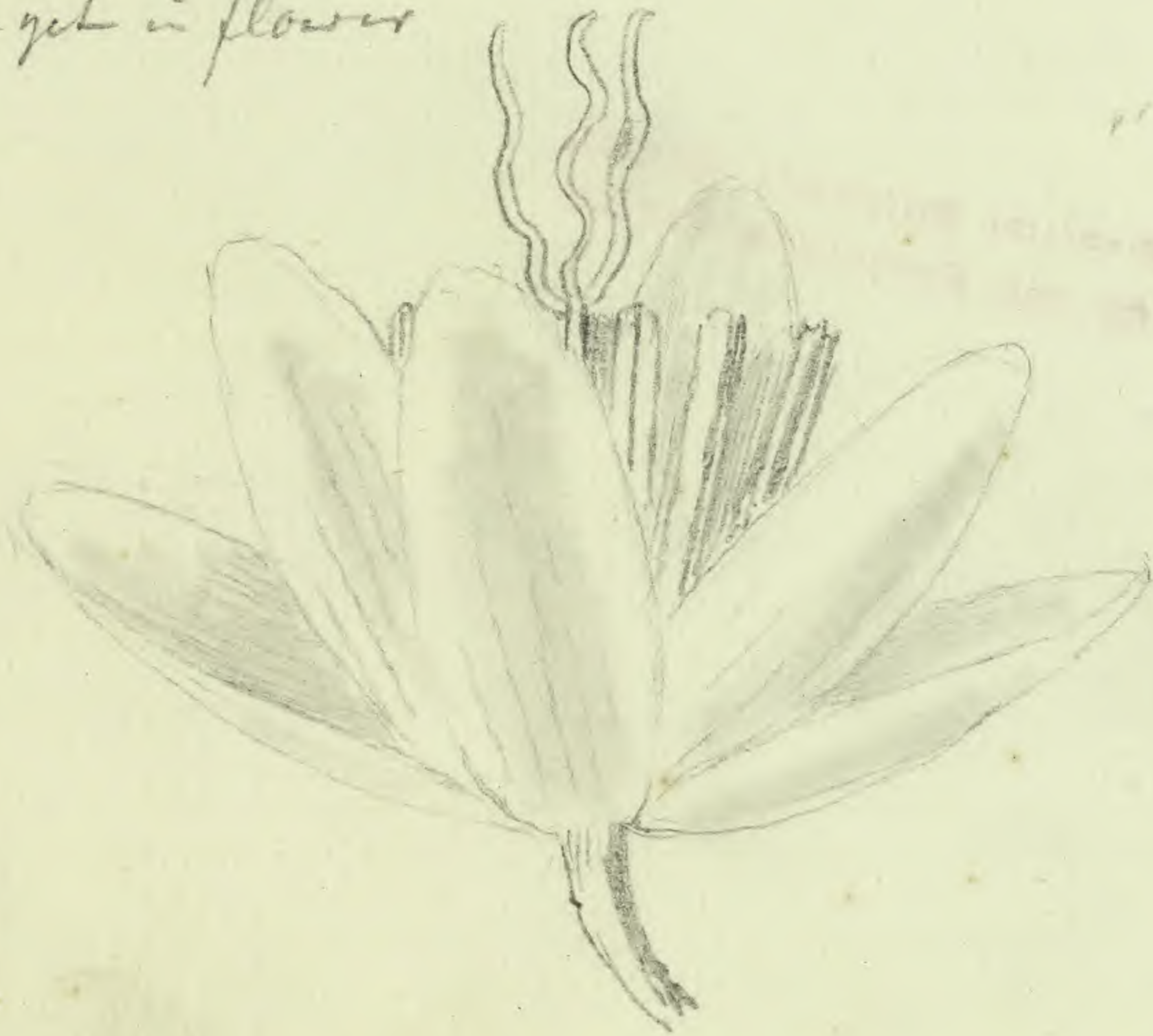
13. *Juncus*

March 22 1866

New Carson City, Nevada

C. L. Anderson 1865

not yet in flower



RECEIVED
MAY 22 1866
HERBARIUM
OF THE
MISSOURI BOTANICAL GARDEN



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4769

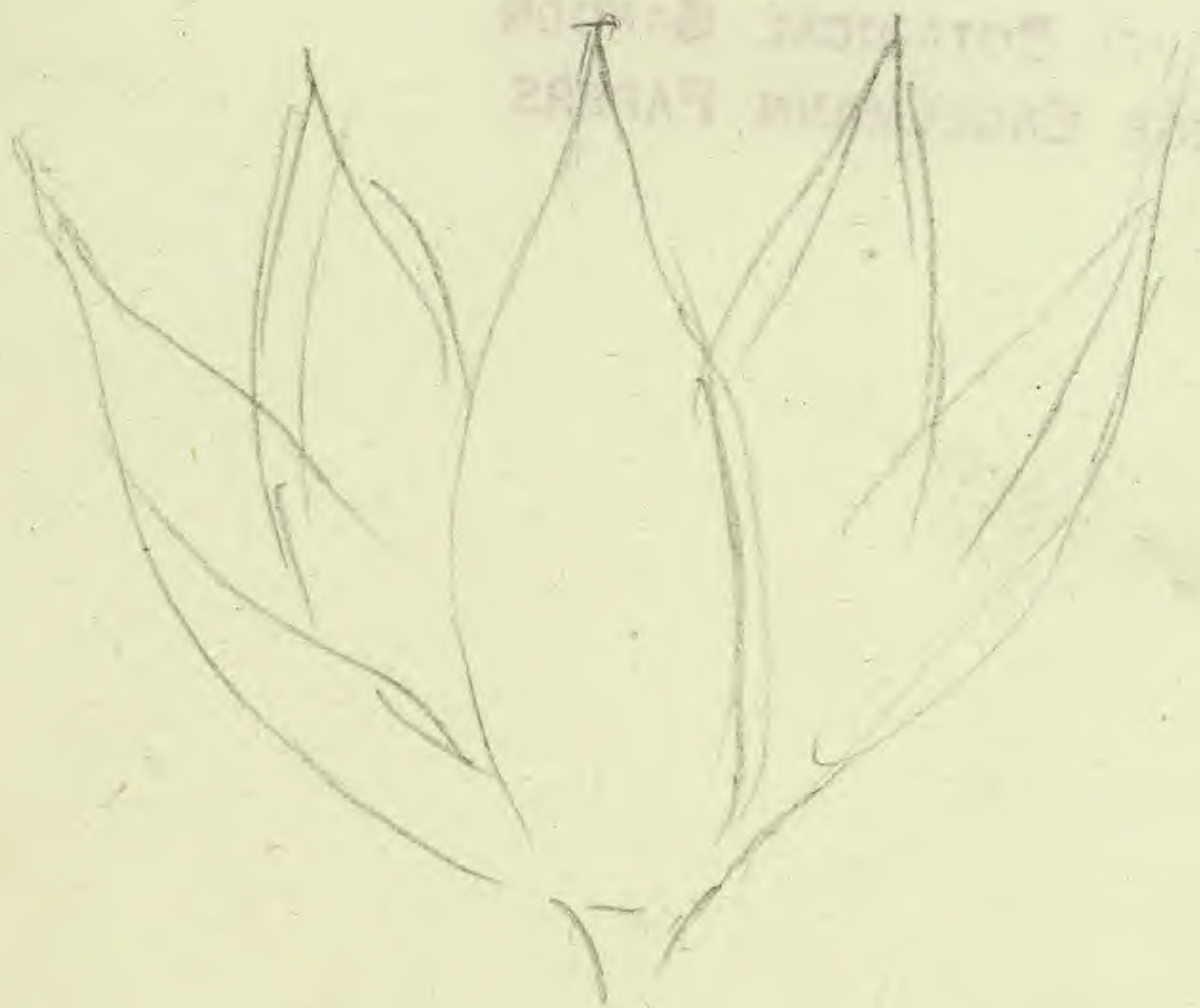
J. phaeophyllus

July 26 1867

Mendocino City

Bohl

May 1866



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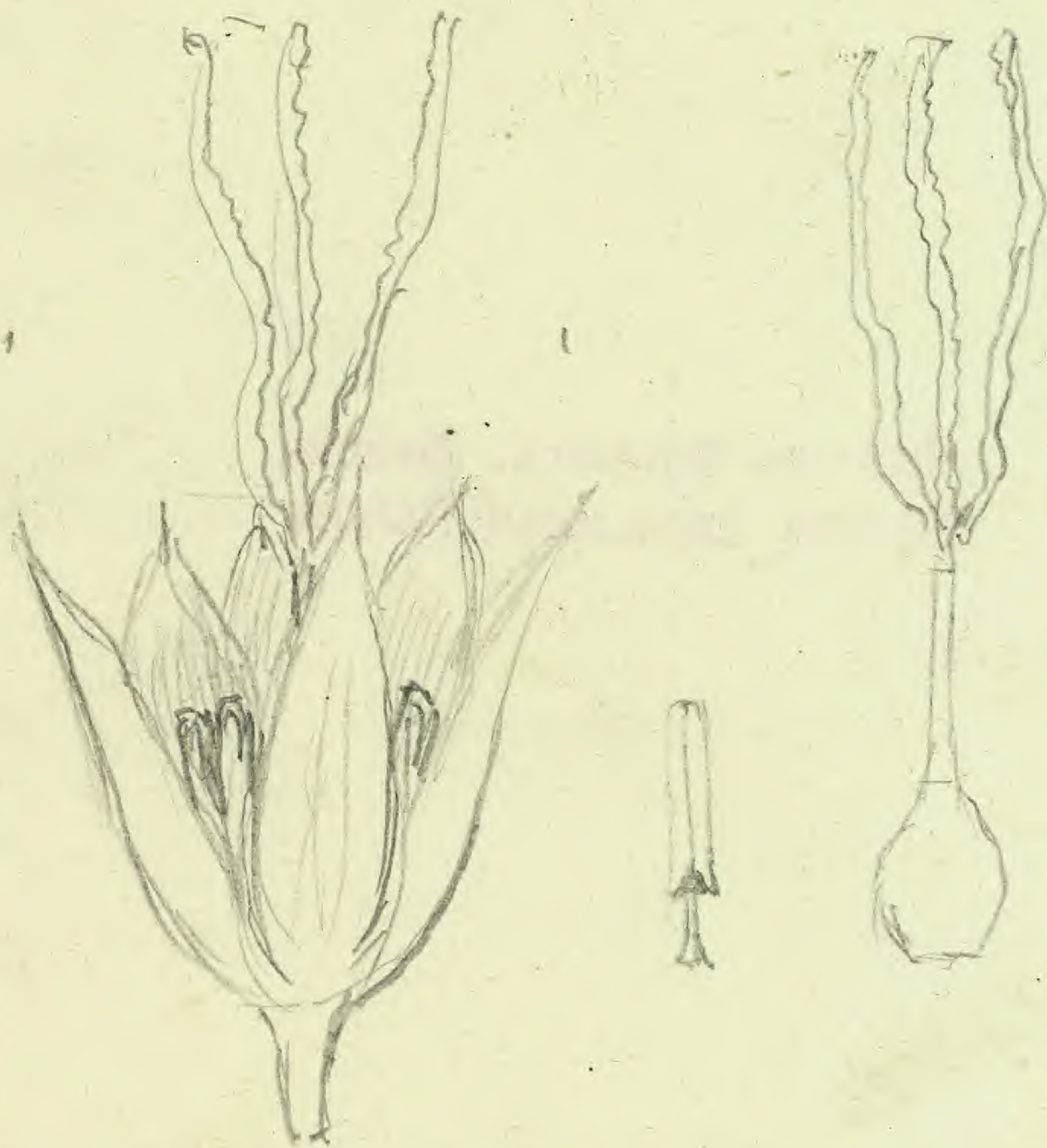
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6036

S. macrocephalus

Jun 27 1867

Yosemite Valley, H. Bolander Jun 1867



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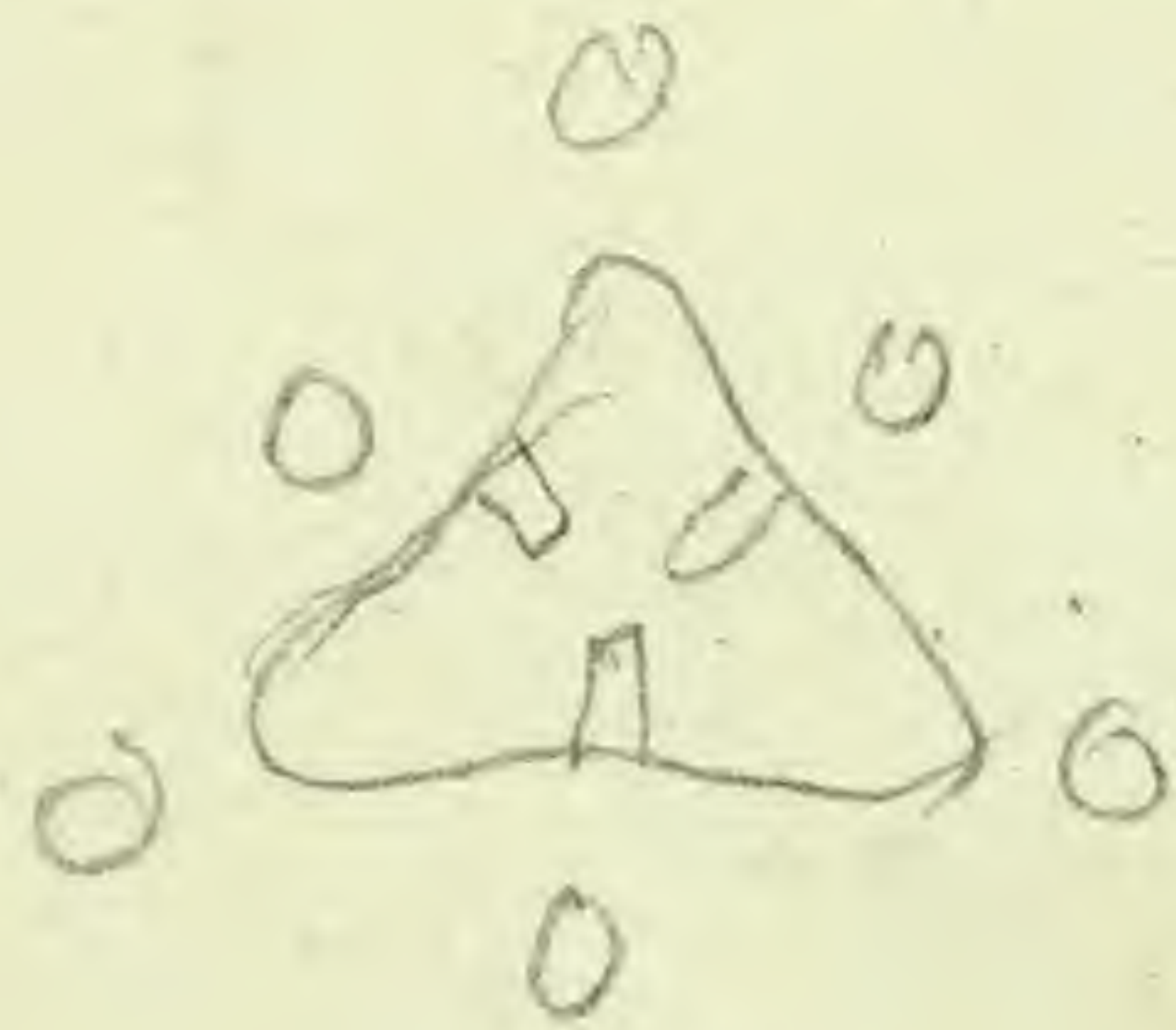
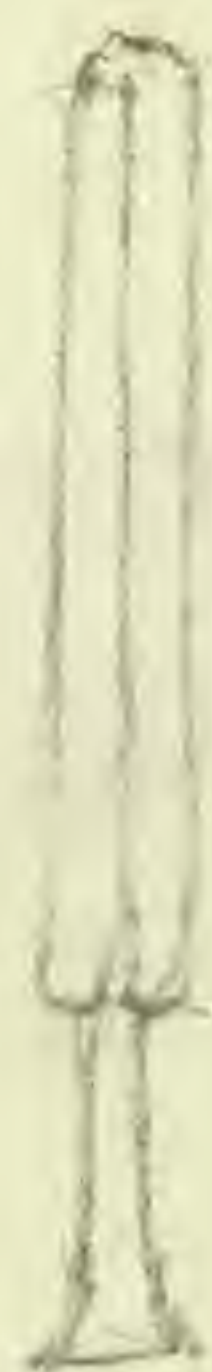
6006

J. phaeocephalus paniculatus July 28 1867
 abrad oxyuris??

Alpine meadows, Sierra Nevada 9000'

H. Bolander, Sept 1868

10-12 inches high



about 7 ribs
 seed unripe

J. Phaeocephalus fl. und ribs
 capsula paulo exserta



0 1 2 3 4 5 6 7 8 9 10

cm

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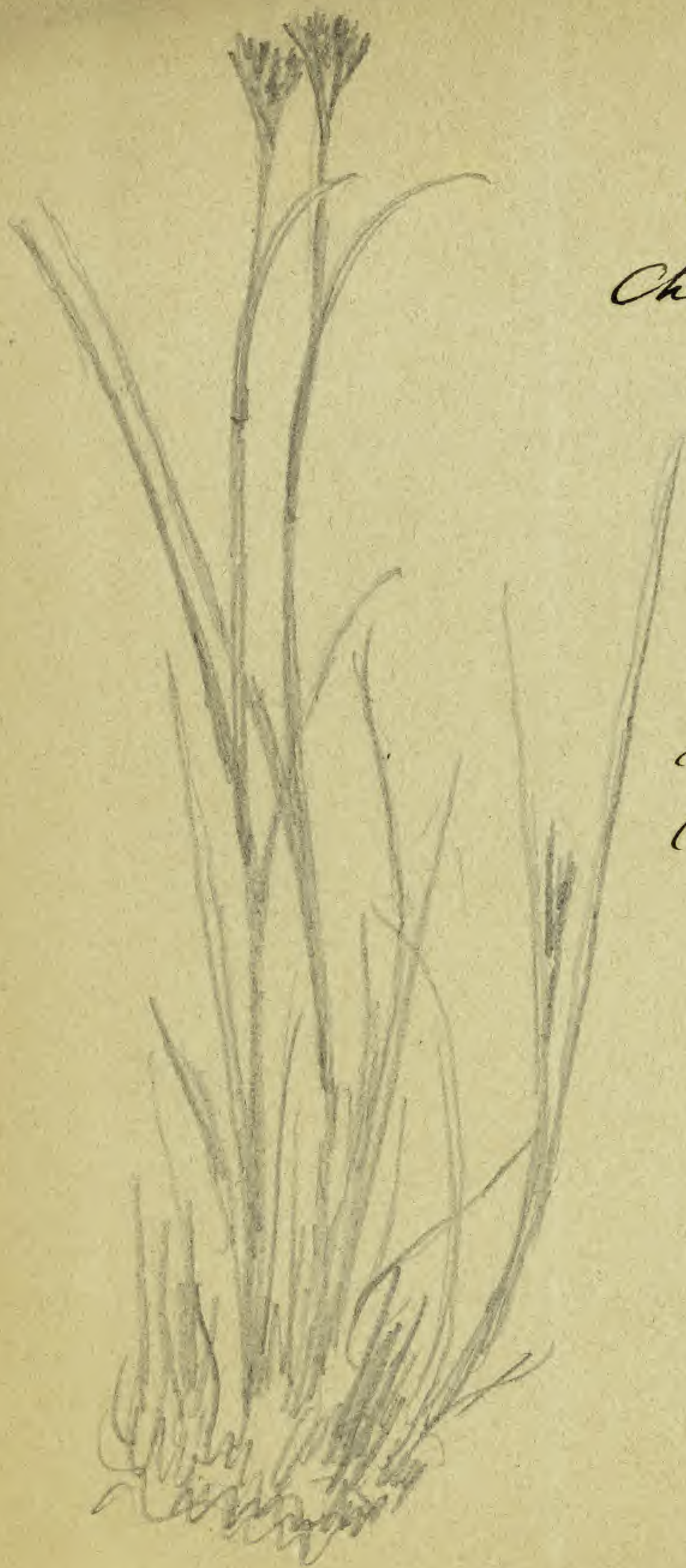
0 1 2 3 4 5 6 7 8 9 10

cm

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Juncus brevifolius Link.
Chinaulta 7000' Mex.

ex Hb. H.B. Kuhn
in Hb. Mus. Paris

plant undeveloped.
esp. tores - panicle
consist. of several
(yet very small) heads



0 1 2 3 4 5 6 7 8 9 10

cm

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0 1 2 3 4 5 6 7 8 9 10

cm

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J. brevifolius, Liebm.

Dec 24 1866

N. 532. With. Schaffner, Val de Mexico in Cordis
montosis prope fossis

alt 800

Aug. 1855

x60



immixta



0 1 2 3 4 5 6 7 8 9 10

cm

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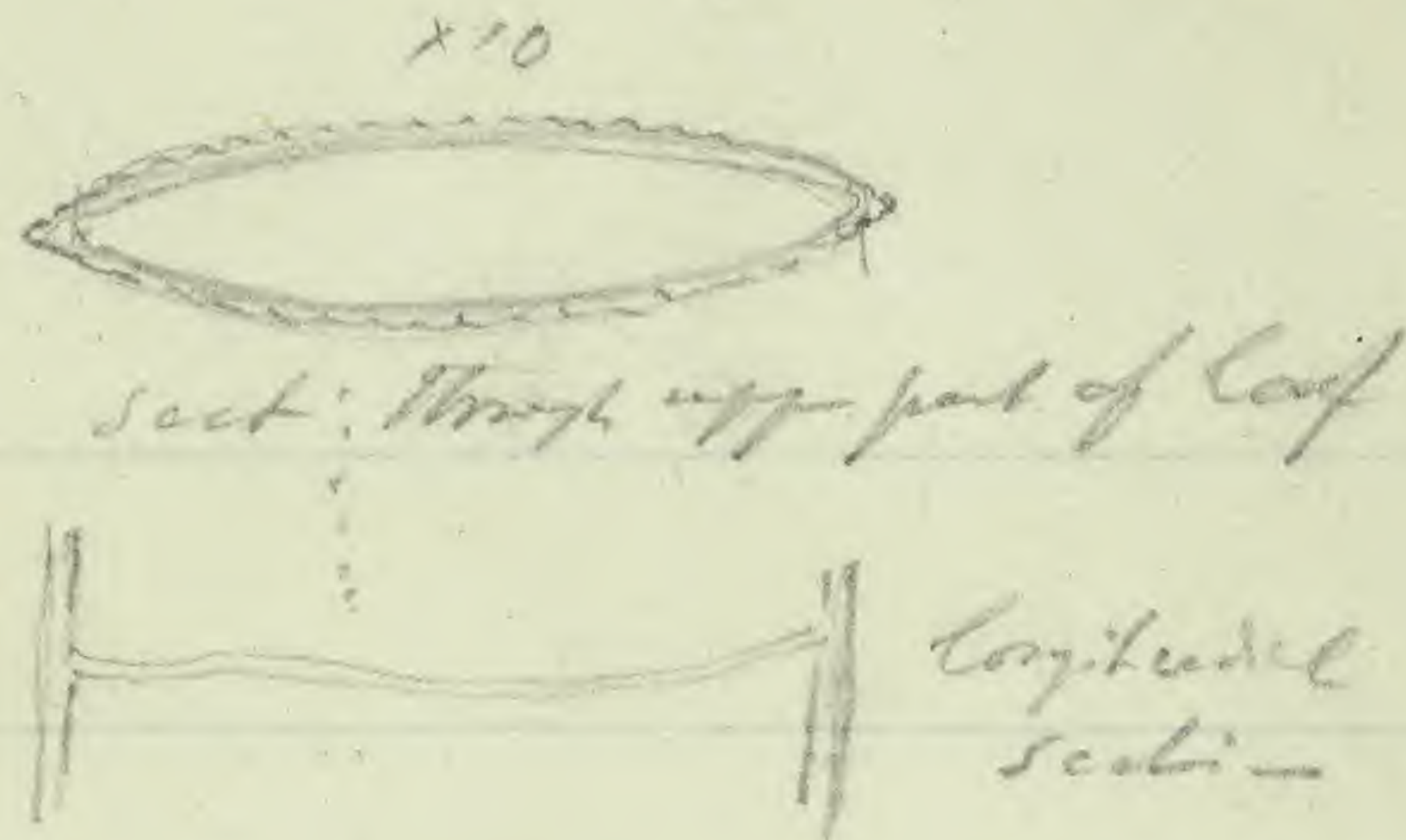
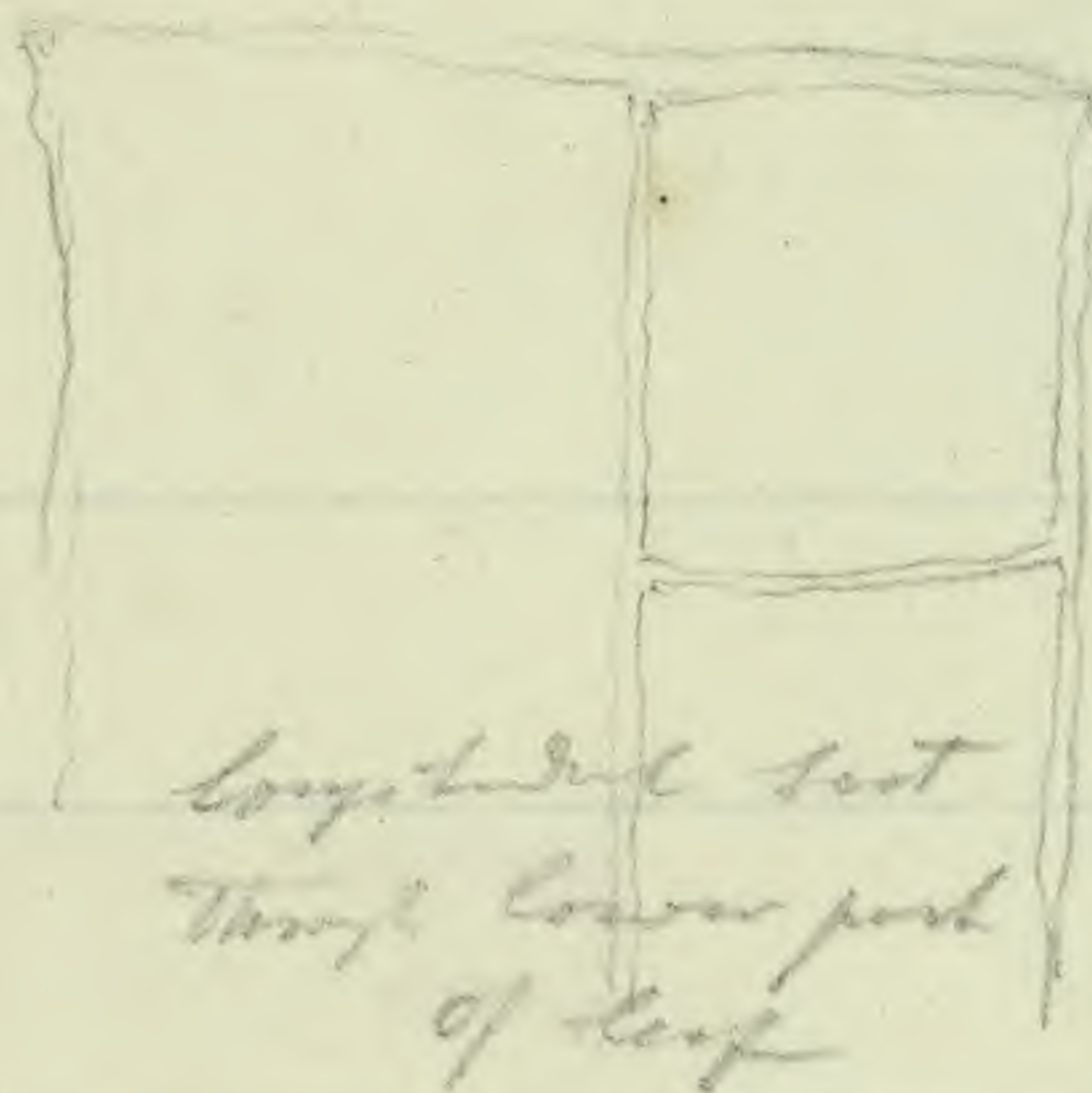
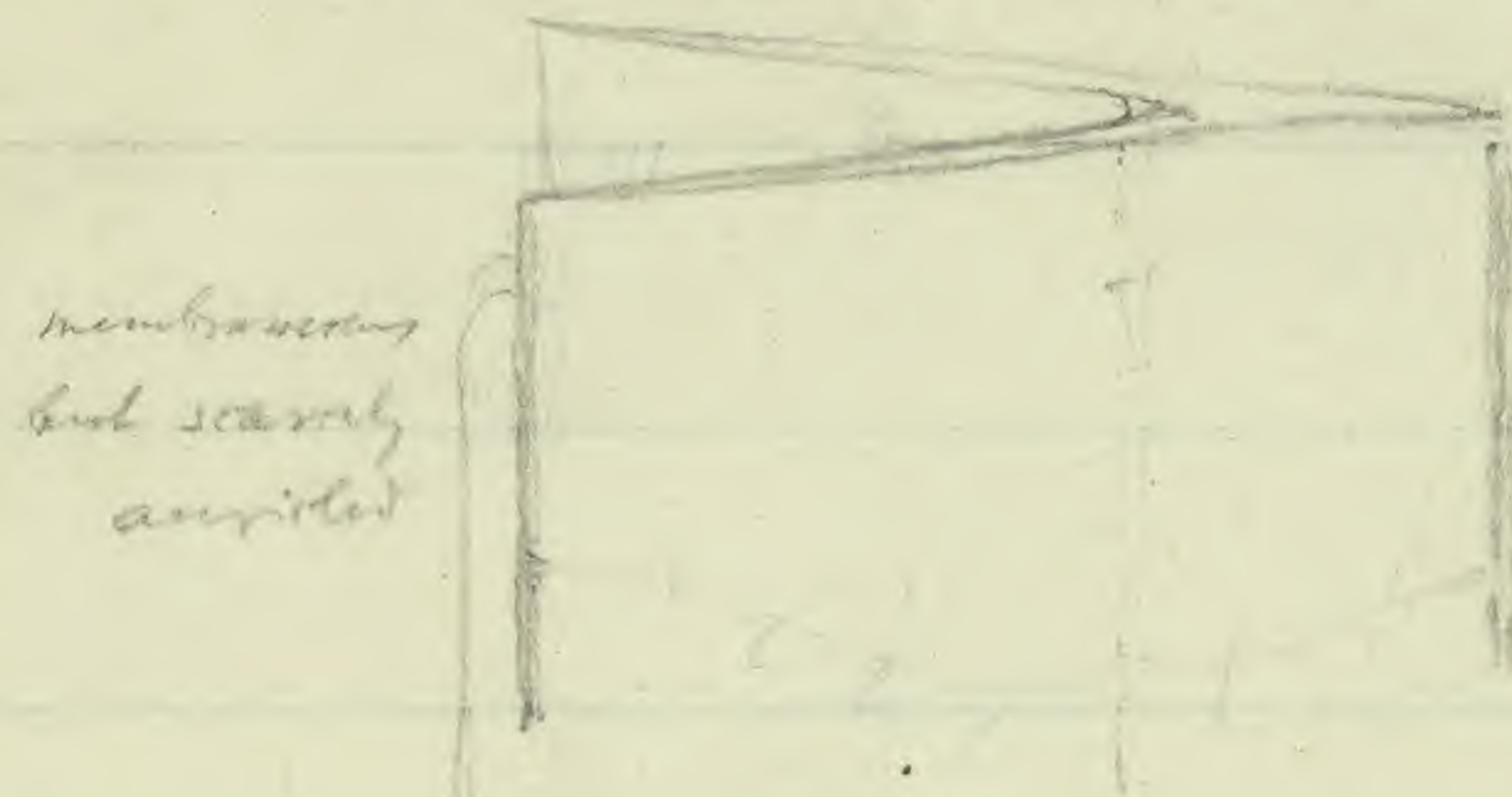
cm

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Saururus cypripedioides, on Grand River, Hot Sulphur Springs Aug 2 1881



sect of upper
part of stem

Transverse section
through middle part



0

1

2

3

4

5

6

7

8

9

10

cm

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10

cm

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Limonium niphoides, marshy places on Clear Creek, Empire City, Colorado Aug 14 1881
 + 100
 Sections of leaf



back of leaf

upper or
axillary part

vertical
section

x 4



0
cm

1

2

3

4

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those underscored have been received. I acknowledge
 Herb norm. June. Revis. sent to marked once /
 revised marked / sent to

N ^o 1.	Kew Gardens	99	specimens + 12 or 15 more
2	A. Gray	99	...
3	Dr. Bercheman	99	...
4	Prof. Boraun	99	...
5	Smithsonian Inst.	99	...
6	Berlin	99	...
7	Paris	99	...
8	Wien	99	...
9	St Petersburg	99	...
10	Philad. Acad	99	...
11	Torrey	99	...
12	München	99	...
13	Bolander	99	...
14	Chapman	99	...
15	De Candolle	99	...
16	Boissier	99	...
17	Shaw ^{Museum} _{Wigwag}	99	...
18	Porter	99	...
19	C. E. Smith	99	...
20	Lenormant	99	...
21	Carnel	99	...
22	Cosson	99	...

For Am. April 1868

Revision	23. Andersson	99	
	24. Durand	98	+
	25. Canby	97	+
	26. Parry	97	
	27. Hill	97	+
	28. Caspari	97	
	29. Müller ^{Austro}	97	
	30. Brewer	97	
	31. Tuckerm.	94	
	32. Booth	94	
	33. Senkenbergi	92	
	34. Kellogg	92	
	35. Leidy	92	
	36. Bigelow	92	
	37. Cesati	92	
	38. Ravenel	92	
	39. Thurber	92	
	40. Lapham	92	
	41. Leachard	91	Parker
	42. Parlatore	91	
	43. Eaton	91	
	44. Mann	91	
	45. Clinton	90	
	46. Curtis	88	
	47. Vasey	88	
	48. Mead	86	

Revision sent to



0 1 2 3 4 5 6 7 8 9 10

cm

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49. Bebb	86	specimens
50 Hegelmair	85	
51 Fries	83	
52 Notaris	83	
53 Schott	83	
54 Olney	83	
55 Samuel Robbins	83	
56 E Hilgard	83	
57 (Commons)	83	
58 Leonhardt	82	
59 Bourquet	81	
60 Grisebach	81	
61 Not rec'd - Berlin!	81	
62 } Europe	81	
63 } Berlin	79	
64 } Duching	79	
65 Not rec'd in Europe	75	
66 Berlin	75	
67	73	
68	73	
69	73	
70 St Louis	73	
71	72	
72	72	
73	69	
74	69	

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75		67 specimens
76		67
77		67
78		67
79		67
80		66
81		65
82		65
83		65
84		65
85		63
86		63
87		63
88		63
89		63
90		63
91		63
92	C. F. Austin	63
93	Lindheimer	62
94	Pech	62
95	Gillman	62
96	O. B. Wheeler	62
97	Diffenbough	62
98	Burke	62
99	A. Smith	62
100	P. P. Porter for ...	62

for 67-91.
for 73-63 not in

29862



0

1

2

3

4

5

6

7

8

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10

cm

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+10 *Vaseyi*
Juncus tenuis var *congestus*

Banks of Grand Lake, Middle Park, Col Aug 5 1881
base of leaf and auricle

Sections of leaf x10



above base middle near tip

leaves very slender, less than $\frac{1}{2}$ of $\frac{1}{3}$
line diameter, very slightly laterally compressed
or nearly terete.



0

1

2

3

4

5

6

7

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10

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0

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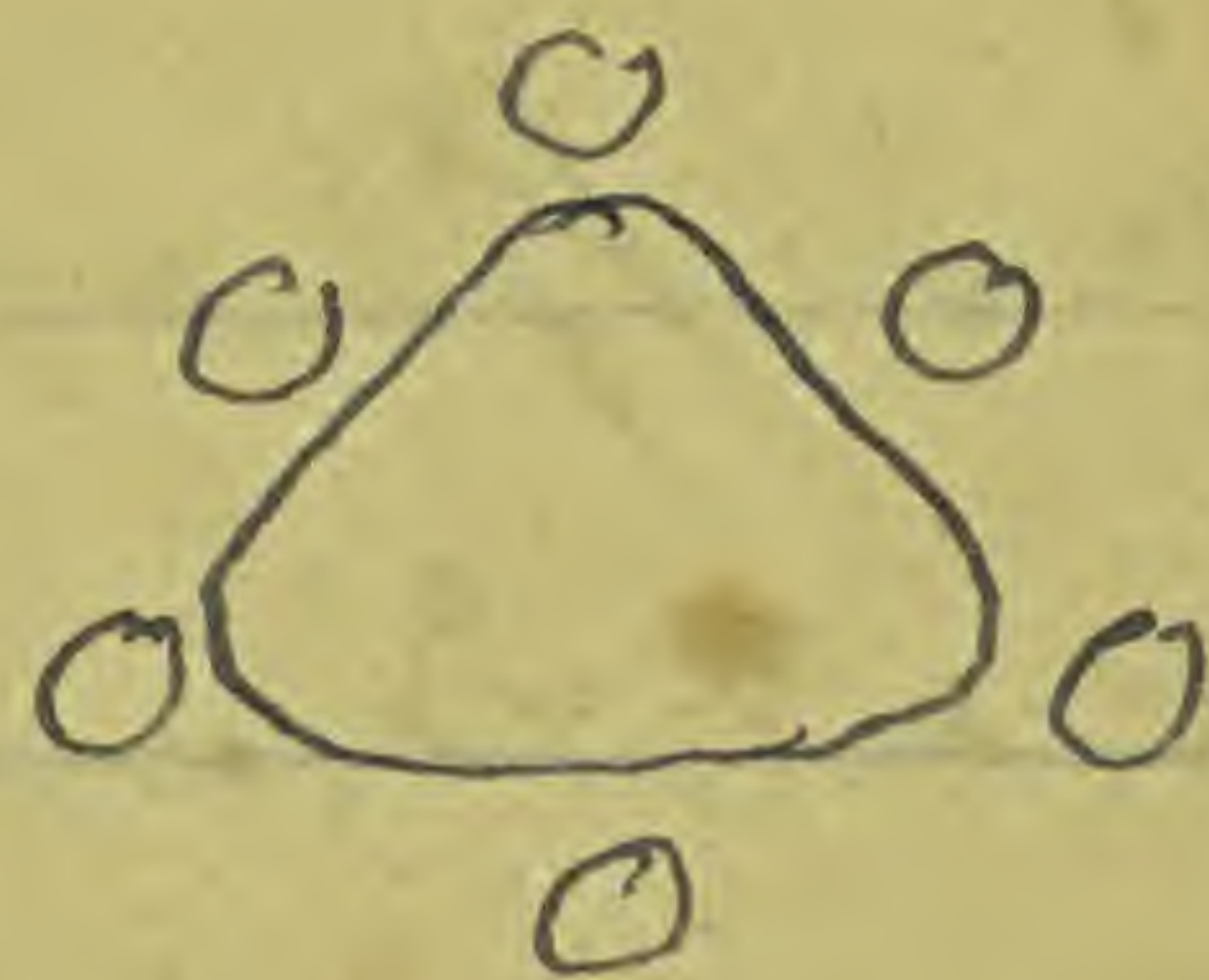
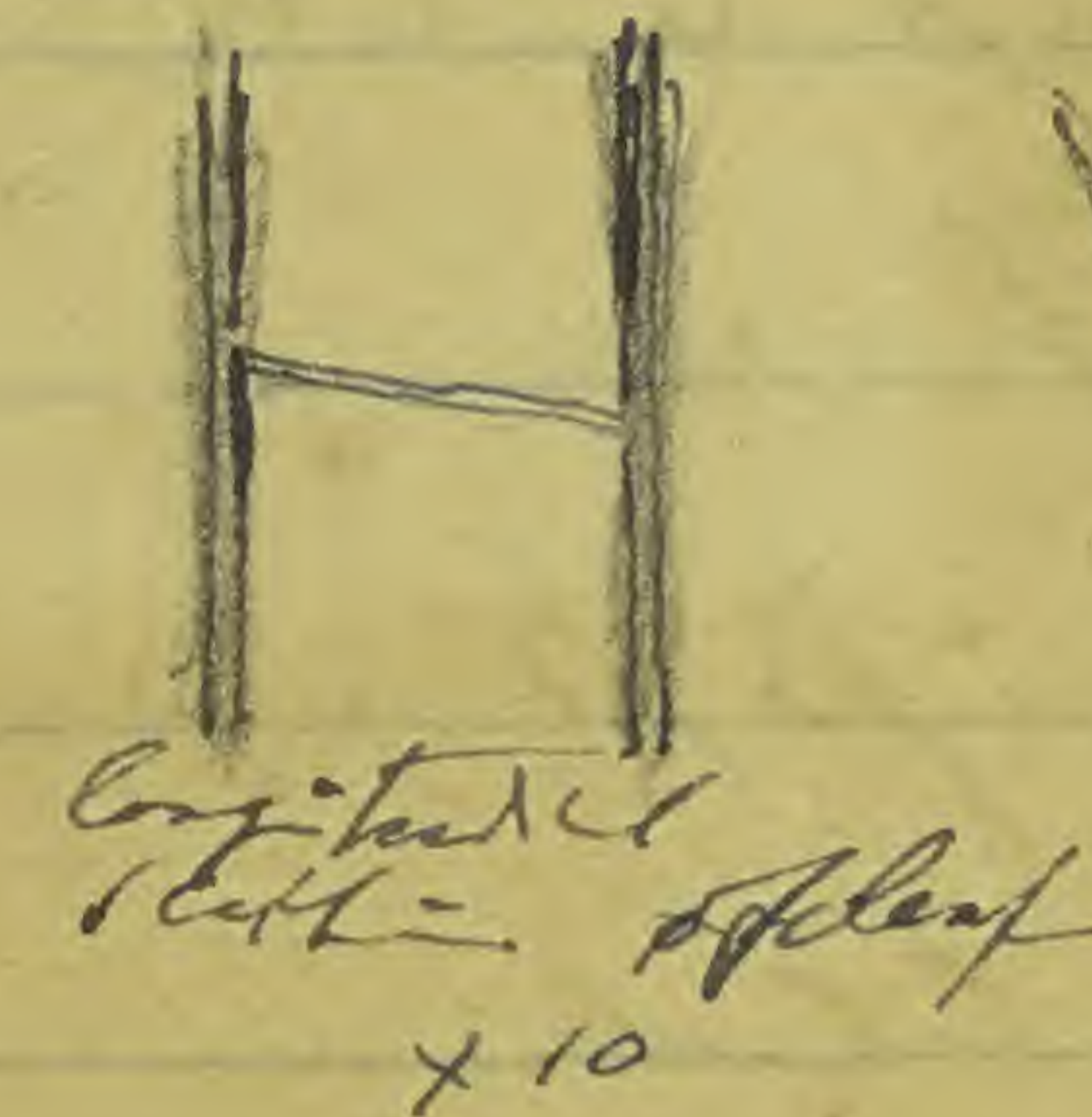


MISSOURI
BOTANICAL
GARDEN

Juncus Montanus

very common in wet places, Berthoud Pass
just now in flower July 26, 1881, while *Parryi*
a little higher up is not yet flowering and *Hallii*
higher up and also in the Pass is just past flowering

Plants here 6-10 inches high, with only a
single head, often consisting of 2 crowded together
— two or three leaves on stem, with membranaceous
auricles, more distinct in the lower leaves, in
the uppermost one narrower



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St. Helena, Nov. 16. Jul. 81.

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS*Euph. glyptosperm*

Grapten von Dr. .

Euphorbia qui, quae, quod?

Ich habe nun, mit grosser Mühe,
 500 Pflanzen (mit Wasser und u. cult.)
 erhalten, von denen ich Ihnen
 nächstens ein Exemplar schicken
 werde. Auch, wie *Yucca*
angustifolia, *Pentstemon albidus* s. m.
 sind für mich selten. (*Yucca* aber
 auf nicht selten.)

Ihr ergebener



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Quercus Pylaei
note in Hb. Standolle Aug 1868. Original species, like
effusus, but flowers much larger, more like glaucous
but flowers green.



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Scy. Hallii n. sp.
L. sapiens var. *Hallii*
1845 St Louis sub *debilis*

also with basilar parts
L. sapiens, Europe, to be compared
young has cutting good effect



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height of
petal in
branches
not in
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